REMARKS

Applicants have carefully considered the Office Action mailed on December 23, 2008. Of the pending claims, the Official Action has rejected Claims 16-17 as allegedly indefinite under 35 U.S.C. §112 second paragraph. The Official Action also has rejected Claims 16-22 as failing to comply with the written description requirement under 35 U.S.C. §112 first paragraph. The Official Action has also rejected Claims 16-22 as failing to comply with the enablement requirement under 35 U.S.C. §112 first paragraph.

In response, Claim 16 has been amended to include a method for decreasing neuronal synaptic transmission of a neuron in a mammalian subject in need thereof and contacting said neuron with an amount of an inhibitor of protein kinase M zeta (PKMζ) that is effective to decrease synaptic transmission in said neuron. Support for this amendment can be found throughout the application generally and on page 9 of the application specifically.

In view of the following remarks, Applicants request further examination and reconsideration of the present patent application.

Rejections under 35 U.S.C. §112

Claims 16 and 17 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 has been amended, giving proper antecedent basis to a neuron in Claims 16 and 17.

Therefore, it is respectfully requested that the rejection of Claims 16 and 17 under 35 U.S.C. §112, second paragraph be withdrawn.

Claims 16-22 are rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement.

Claim 16 stands rejected for reciting "wherein the synaptic transmission comprises long-term potentiation (LTP)," which the Official Action states is new matter. The claimed invention provides a method for causing amnesia or decreasing synaptic transmission, comprising the administration of a therapeutically effective amount of a PKMζ inhibitor. Based on this statement and background knowledge, one of ordinary skill in the art would know that a method for decreasing synaptic transmission for causing amnesia could be achieved by a PKMζ inhibitor which can decrease synaptic transmission by long-term potentiation (LTP). Through the description of Figure 7, which states that an inhibitor of PKMζ prevents LTP, and the first paragraph of page 9, which states that PKMζ is both necessary and sufficient for the long-term maintenance of LTP, one of ordinary skill in the art would know that the Applicant possessed the subject matter of Claim 16 at the time of filing. Specifically, one of ordinary skill in the art would know that an inhibitor of PKMζ would be effective to decrease synaptic transmission, where that synaptic transmission comprises LTP.

Claim 16 also stands rejected for reciting "effective to decrease synaptic transmission in said mammalian neuron," which the Official Action states is new matter. The second paragraph on page 9 makes it clear that PKMζ has a role in maintaining enhanced synaptic transmission with studies of LTP, conversely, inhibition of PKMζ may cause amnesia. Based on this statement, a person of ordinary skill in the art would know that if PKMζ maintained enhanced synaptic transmission with LTP, an inhibitor of PKMζ would decrease synaptic transmission with LTP. The second paragraph on page 11 discloses a method of reducing synaptic transmission in selective areas of the brain or spinal cord by the administration of a therapeutically effective amount of PKMζ inhibitor. Based on this statement, a person of ordinary skill in the art would recognize that the claimed features of Claim 16 were adequately

conveyed, and that Applicant had possession of the subject matter of the claimed invention at the time of filing.

Claim 17 stands rejected for reciting "the neuron is a brain neuron or a spinal cord neuron," which the Official Action states is not disclosed in the specification. The second paragraph on page 11 states that the present invention also contemplates a method of reducing synaptic transmission in selective areas of the brain or spinal cord by the administration of a therapeutically effective amount of PKMζ inhibitor. The reduction of synaptic transmission refers to the transmission between two neurons, which a person of ordinary skill in the art would recognize. Further, the discussion of LTP described above was not exclusive of types of neurons but rather describes neurons generally. There is nothing in the claimed invention or the Office Action that goes towards distinguishing types of neurons, or states that different neurons will react differently to the claimed method. Further still, the Examiner has not met the initial burden of rebutting why one skilled in the art would not recognize the subject matter of the claimed invention as described in the specification, but just makes the unsupported statement that this is the case.

Claim 18 stands rejected for reciting "the contacting of said neuron with the inhibitor of PKMζ is at the outer surface of said neuron, followed by the entry of said PKMζ inhibitor into the cell," which the Official Action states is new matter. The first paragraph of page 21 discusses diffusion of PKMζ inhibitor into a target cell after exposure to PKMζ inhibitor. The target cell discussed is a neuron, which after being contacted on its outer surface by the PKMζ inhibitor, the PKMζ inhibitor diffuses and enters into the neuron. A person of ordinary skill in the art would recognize that this discussion and description provides a full disclosure of the claimed subject matter of Claim 18.

Actual reduction to practice is not required for any claimed subject matter, the cited portions of the specification are acceptable evidence demonstrating to one skilled in the art that the Applicant possessed the subject matter of the claims at the time of filing. Further, the Official Action has failed to state a prima facie case of unpatentability; none of the rejections are supported by specific findings or factual evidence that one skilled in the art would not consider the Applicant to be in possession of the claimed invention.

Therefore, it is respectfully requested that the rejection of Claims 16 -22 under 35 U.S.C. §112, first paragraph be withdrawn.

Claims 16-22 stand rejected under 35 U.S.C. 112, first paragraph as allegedly failing to comply with the enablement requirement.

The specification demonstrates that an administration of about a 0.1 to about a 10 nanomolar dose, achieves desired results. These desired results, can be seen for example in Figure 2A-2B, and discussion thereof. Figures 2A-2B of the present application show the reduction in Excitatory PostSynaptic Current (EPSC), as described on page 21 of the present application. These figures show the reduction in EPSC caused by the addition of chelerythrine, and the subsequent increase in EPSC occurring once the chelerythrine has been washed out. The decrease in EPSC is evidence of a decrease in neuronal synaptic transmission, which is the direct result to an addition of chelerythrine. The addition of a PKMζ inhibitor, such as chelerythrine to a neuron is an example of the claimed process. Further the exemplary concentration was 3 nM, which is within the range of 0.1 to 10 nM dose administration to achieve the desired results described on page 14 of the specification.

This experimental data is an actual demonstration that an animal's (in this case a hippocampal CA-1 pyramidal cells of Spraque-Dawley rats) synaptic transmission does decrease

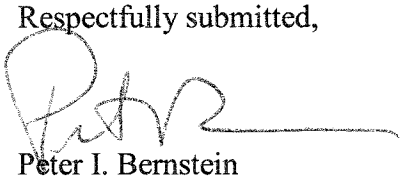
with the application of a PKMζ inhibitor. A person of ordinary skill in the art would recognize from this disclosure that an appropriate amount of chelerythrine or myristolated zeta inhibitory pseudosubstrate peptide would decrease neuronal synaptic transmission.

Unless there is a reason to doubt the objective truth of statements made in the application, they are presumed to satisfy the enablement requirement. *In re Marzocchi,* 439 F.2d 220, 224 (CCPA 1971). The Official Action has not provided a sufficient reason to doubt the truth of the experimental data reproduced in the present application, therefore the claimed invention does satisfy the enablement requirement. The Official Action cites sources to cast doubt on the effectiveness of a dose of an PKMζ inhibitor, but these citations do not provide a sufficient reason to doubt the experimental data submitted, which shows a reduction in EPSC in response to an addition of chelerythrine, a PKMζ inhibitor. None of the references proposed by the Official Action describe the specific process and claimed result of the present application.

Therefore, it is respectfully requested that the rejection of Claims 16 -22 under 35 U.S.C. §112, first paragraph be withdrawn.

For the reasons set out above, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested. Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact the Applicant's undersigned representative at the telephone number below.

Respectfully submitted,



Peter I. Bernstein
Registration No. 43,497

Scully, Scott, Murphy & Presser, PC.
400 Garden City Plaza, Suite 300
Garden City, New York 11530
(516) 742-4343
PIB:DRB/vh